IT Unit 3

Topic 1

# Organisations & Data Management

**Developing a RDBMS, p 45**

1. In which stage of the PSM does this occur?
2. What is meant by referential integrity?

**Testing the solution, p 49**

1. What is the purpose of testing?

* Testing is undertaken to ensure that all features and functions work correctly and that the information produced ids free of errors.

1. Distinguish between informal and formal testing.

* Informal testing occurs during the development stage. As software developers create a solution they are constantly to see if the solution behaves according to expectations.
* Formal testing involves testing the overall solution after been completed to see if it solves the problem. This type of testing is formalised with comprehensive documentation of eac test and each test outcome.

1. What is a bench test?

* A bench test forms part of the formal testing process in which sample data has been developed during the design stage which is used to determine how the solution behaves with a range of data.

1. What is a test plan and what are the benefits of having a test plan?

* A test plan is a list of features and function that will be test throughout the course of development stage. Benefits to this is that you have a plan which makes it easier to test ???

1. What is meant by user acceptance testing?

* Acceptance testing is asking the user to follow a series of steps to complete a task in the solution or interpreting the information contained in the output, then providing feedback plan during the design stage.

**Testing procedure:**

The test plan is used to allow a systematic check of each part of the solution to ensure its proper operation. It involves six steps (three at design stage & three at development stage:

1. Decide on tests to be conducted (design stage).
2. Determine the test data (design stage).
3. Determine expected results (design stage).
4. Record results of testing (develop stage).
5. Correct any errors (develop stage).
6. Provide concluding statement (develop stage).

**Features to test:**

1. Testing table validation
   1. What is the purpose of testing validation?

* Testing validation ensures that the data is accurate before it is entered via form or queries are run. It important that in the testing process to choose data that will test the boundaries of the validation rule.
  1. What is the rule of thumb in testing data values?
* Test a value before the value itself and one value greater than the values in the validation rule.

1. Testing the query selection criteria
   1. In testing the queries, why must the test data be chosen carefully?

* To ensure that there are some records that should be returned by the query, some that should be rejected for failing to meet the first criterion even though they meet the second criterion, some fail to meet the second criterion after meeting the first criterion and finally some that miss both criteria.

1. Testing formulas and summary statistics

* It is also critical to test formulas and summary statistics that occur in your queries. Choose appropriate test data so that it is easy to determine if the final results is accurate.

1. Testing sorting, primary & secondary

* The key to sorting primary and secondary data is to demonstrate that a sort works alphabetically or numerically or even alphanumerically.